Received: March 23, 2018

IURC 30-Day Filing No.: 50119

Indiana Utility Regulatory Commission

March 23, 2018

Mary Becerra
Secretary of the Commission
Indiana Utility Regulatory Commission
101 West Washington Street, Suite 1500 E
Indianapolis, Indiana 46204
mbecerra@urc.in.gov
Electronically delivered

RE: Duke Energy Indiana, LLC's 30-day filing on February 23, 2018, IURC 30-Day Filing No. 50119.

Objection to Duke Energy's 30-Day Filing on behalf of Citizens Action Coalition and the Environmental Law & Policy Center

Pursuant to the guidelines for submitting an objection to a 30-day filing as outlined on the Commission's website at https://www.in.gov/iurc/2519.htm, Citizens Action Coalition ("CAC") and the Environmental Law & Policy Center ("ELPC") (collectively "Objectors") respectfully submit this Objection to the 30-day filing made by Duke Energy Indiana, LLC ("Duke Energy") on February 23, 2018, IURC 30-Day Filing No. 50119. Duke Energy's 30-day filing is attached as Exhibit A.

Duke Energy's 30-day filing concerns its obligations under the Public Utility Regulatory Policies Act ("PURPA"), including PURPA's implementing regulations and Indiana's PURPA implementation. *See generally* 18 CFR § 292.101, *et seq.*; Burns Ind. Code Ann. § 8-1-2.4-1, *et seq.*; 170 IAC 4-4.1-1 *et seq.* PURPA requires electric utilities to purchase energy and capacity from qualifying facilities ("QFs"), such as renewable energy facilities, and the rate for these mandatory purchases are based on the utility's avoided costs. *See* 18 C.F.R. §§ 292.303, 292.304.

An objection is valid if it alleges that a 30-day filing is in violation of applicable law or the filing is incomplete. *See* 170 IAC 1-6-7(b)(2)(A)(i), (b)(2)(C)(i). Duke Energy's 30-day filing violates applicable law by failing to include provisions for long-term standard contacts with fixed rates in compliance with Burns Ind. Code Ann. § 8-1-2.4-4(a), 170 IAC 4-4.1-11(c)(1) and 18 C.F.R. § 292.304(d)(2)(ii). Duke Energy's 30-day filing also failed to include avoided cost information required by 18 C.F.R. § 292.302(b). The failure to provide this legally required information violates applicable law and constitutes an incomplete filing.

Duke Energy's failure to provide a long-term standard contract with a fixed-rate inhibits development of QFs in Indiana and violates the state's policy to "encourage the development of alternate energy production facilities." Burns Ind. Code Ann. § 8-1-2.4-1. Increased QF development would introduce additional competition into Indiana's market by enabling private QF development at the utility's own avoided costs. Thus, PURPA is not a "subsidy" program for renewable energy. Instead, it is a cost-neutral policy that protects ratepayers by creating downward pressure on utility costs.

ELPC and CAC respectfully request that the Commission deny Duke Energy's 30-day filing and open a statewide docket to investigate and establish modernized PURPA implementation methodologies that will enable Indiana utilities to comply with state and federal law.

BACKGROUND ON OBJECTORS

CAC is a 501(c)(4) membership organization of organizations and more than 40,000 individual members and contributors throughout the State of Indiana. CAC initiates, facilitates, and coordinates citizen action directed at improving the quality of life of all Indiana residents through principled advocacy of public policies that, among other things, promote government accountability and protect consumers and ratepayers. CAC and its members have an interest in promoting the development and availability of renewable energy through implementation of PURPA and are likely to suffer an injury if Duke Energy does not comply with its obligations under PURPA.

ELPC is a 501(c)(3) public interest organization that works to achieve cleaner air and water, promote renewable energy and energy efficiency resources, and preserve natural resources in Indiana and the Midwest. ELPC has an office located in Indianapolis and has members throughout the state of Indiana and the Midwest. On behalf of itself and its members, ELPC played a significant role in recent proceedings in Michigan, Iowa, and Minnesota where those states updated their implementation of PURPA. ELPC and its members have an interest in promoting the development and availability of renewable energy through implementation of PURPA and are likely to suffer an injury if Duke Energy does not comply with its obligations under PURPA.

BACKGROUND ON PURPA

Congress enacted PURPA to "encourage the development of cogeneration and small power production facilities." *Am. Paper Inst. v. Am. Elec. Power Serv. Corp.*, 461 U.S. 402, 405 (1983). PURPA combats an inefficient preference for utility self-generation and removes barriers for non-utility generation where such generation is cost-effective, thereby increasing competition and creating a downward pressure on power generation costs. *See In re Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities*, 75 F.E.R.C. P61,080, at § III.C (1996) ("Congress recognized that the rising costs and decreasing efficiencies of utility-owned generating facilities were increasing rates and harming the economy as a whole."); *see also FERC v. Mississippi*, 456 U.S. 742, 750-751 (1982).

Accordingly, Indiana's PURPA policy implementation is "to encourage the development of alternate energy production facilities, cogeneration facilities, and small hydro facilities in order to conserve our finite and expensive energy resources and to provide for their most efficient utilization." Burns Ind. Code Ann. § 8-1-2.4-1. Indiana's implementation contains positive requirements that could encourage QF development, such as requiring long-term contracts and the establishment of standard contracts. *See* Burns Ind. Code Ann. § 8-1-2.4-4(a); 170 IAC 4-4.1-11. However, as will be shown below, utilities in Indiana are not complying with

such requirements, and therefore Indiana utilities are falling short of the state's explicit policy to "encourage the development of alternate energy production facilities."

PURPA is the only federal law that requires competition in states that have not restructured their electricity markets. PURPA accomplishes this through its mandatory purchase obligation that ties the rates for purchase to a utility's avoided cost. Tying rates to avoided costs (1) ensures no subsidization occurs, (2) protects ratepayer interests, and (3) provides ratepayers the benefit of low-cost renewable generation.

State regulators and stakeholders are increasingly focused on PURPA in light of the dramatic reduction in renewable energy development costs. With the growing relevance of PURPA, other states are updating their implementation for the first time in over two decades. For instance, the Michigan Public Service Commission ("MPSC") has been conducting a process to update its PURPA implementation. Beginning in late 2015, the MPSC ordered the creation of a working group to investigate the state's implementation of PURPA and invited all utilities, developers, and other interested stakeholders to participate.¹

In 2016, the investigation culminated in the MPSC's Staff publishing a report detailing the state's implementation with recommendations on how the MPSC could modernize its PURPA implementation.² The MPSC then instituted dockets for each regulated utility to modernize its PURPA implementation and to determine, among other things, (1) the appropriate avoided cost methodology, (2) adequate term length for standard contracts, and (3) adequate procedures to encourage development of QFs.³ The MPSC ordered Michigan utilities to offer long-term contracts, and concluded that QF development could benefit ratepayers in several ways, such as offsetting or deferring the construction of large utility power plants. As the Commission recognized, "there is significant ratepayer value in deferring large, capacity additions through contracting with QFs for incremental capacity."

ELPC played a key role in Michigan's update as an active participant in the investigation and as an intervenor in the subsequent dockets opened for each utility. ELPC has also participated as an intervenor in Iowa's 2017 update to its PURPA implementation⁵ and as intervenors in an ongoing complaint case between a QF and utility in Minnesota, which could result in Minnesota updating its PURPA implementation for the first time in over a decade.⁶ ELPC and CAC respectfully request that the Commission deny Duke Energy's 30-day filing and

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¹ See generally In re, on the Commission's own motion, commencing an investigation into the continuing appropriateness of the Commission's current regulatory implementation of the Public Utility Regulatory Policies Act of 1978, Case No. U-17973, Order Commencing Investigation (Oct. 27, 2015) available at https://perma.cc/4ZVM-XFVD.

² *Id.*, PURPA TECHNICAL ADVISORY COMMITTEE, Report on the Continued Appropriateness of the Commission's Implementation of PURPA (April 8, 2016) *available at* https://perma.cc/7JFL-HWEK.

³ See generally In re Consumers Energy Co., et al., Case Nos. U-18089, U-18090, U-18091, U-18092, U-18093, U-18094, U-18095, Order (May 3, 2016) available at https://perma.cc/B739-R7B5.

⁴ In re Consumers Energy Co., Case No. U-18090, Order at 18, (Mich. Pub. Serv. Comm'n May 31, 2017) available at https://perma.cc/4K2Z-5WWW.

⁵ See generally In re Interstate Power and Light Co., Docket No. TF-2016-0290 (Iowa Util. Bd.); In re MidAmerican Energy Co., Docket No. TF-2016-0294 (Iowa Util. Bd.).

⁶ See generally Red Lake Falls Community Hybrid, LLC v. Otter Tail Power Co., Docket No. 16-1021 (Minn. Pub. Util. Comm'n).

follow the lead of other Midwestern states to ensure that Indiana utilities are in full compliance with state and federal law.

OBJECTIONS

OBJECTION ONE: Duke Energy's 30-Day Filing Fails to Contain a Long-Term Contract and Contract Term Length, Both of Which are Required by Indiana Law.

There are three requirements applicable to the standard contracts attached to Duke Energy's 30-day filing. First, Indiana law requires electric utilities to enter into "long term" contracts for the purchase of energy and capacity by PURPA QFs. Burns Ind. Code Ann. § 8-1-2.4-4(a). Second, Indiana's PURPA regulations require electric utilities to file a standard contract that must include "[t]he term of the contract." 170 IAC 4-4.1-11(c)(1). Third, federal law requires that long-term contracts include the ability to obtain fixed rates. 18 C.F.R. § 292.304(d)(2)(ii); see also Winding Creek Solar LLC v. Peevey, No. 13-04934, 2017 WL 6040012, at *9 (N.D. Cal. 2017) (finding that a standard contract violates PURPA if it fails to contain an option to obtain fixed rates).

Duke Energy's 30-day filing fails to contain a standard contract with a term length, as required by 170 IAC 4-4.1-11(c)(1), and failure to provide a term length also fails to provide the opportunity for a "long term" contract, as required by Burns Ind. Code Ann. § 8-1-2.4-4(a). In Duke Energy's standard Contract for the purchase of energy, the term length is left <u>blank</u>. *See* Exhibit A at 7, ¶ 12. Likewise, in standard Contract for the purchase of energy and capacity, the term length is left <u>blank</u>. *See* Exhibit A at 12, ¶ 17. By leaving the term length blank, Duke fails to comply with Indiana law requiring "the term of the contract," 170 IAC 4-4.1-11(c)(1), and fails to provide a "long term" contract, as required by Burns Ind. Code Ann. § 8-1-2.4-4(a).

Duke Energy's standard contract also fails to contain an option for a fixed rate contract, as required by 18 C.F.R. § 292.304(d)(2)(ii). For both the standard contract for energy and the standard contract for energy and capacity, the rates for purchase are updated annually, which means rates are not fixed if the contract is longer than one year. *See* Exhibit A at 6, ¶ 6; at 10, ¶¶ 6-7. Nowhere else in the standard contract is there an option for fixed rates in contracts longer than a year, as required by 18 C.F.R. § 292.304(d)(2)(ii). *See also Winding Creek Solar LLC*, No. 13-04934, 2017 WL 6040012, at *9. "[S]tate regulatory authorities cannot preclude a QF—even an intermittent QF—from obtaining a legally enforceable obligation with a forecasted avoided cost rate." *Windham Solar LLC and Allco Finance Limited*, 157 F.E.R.C. P61,134, at ¶ 6 (2016).

The inability to obtain long-term, fixed-rate contracts has discouraged developers from pursuing projects in Indiana. See Affidavit of Jim Straeter at \P 2. Not only does Duke Energy's standard contract fail to contain an option for long-term, fixed-rate contracts, but they have been unwilling to agree to long-term, fixed-rate contracts through negotiations with developers. See Affidavit of Sam Kliewer at \P 2.

The lack of a legally required, long-term contract with fixed rates in Duke Energy's 30-day filing is important because the lack of long-term, fixed-rate contracts both violates the specific requirements of Indiana law *and* inhibits the development of QFs across Indiana, thus failing to promote Indiana's policy of encouraging QF development. *See* Burns Ind. Code Ann. § 8-1-2.4-1. The Federal Energy Regulatory Commission ("FERC"), the agency delegated authority to promulgate federal regulations and enforce PURPA, recognized that long-term contracts with QFs must be "long enough to allow QFs reasonable opportunities to attract capital from potential investors." *Windham Solar LLC*, 157 F.E.R.C. P61,134, at ¶ 8.

PURPA QFs cannot develop in Indiana without long-term, fixed-rate contracts, because such contracts are required to obtain the financing necessary to develop such projects. *See* Affidavit of Jim Straeter at ¶ 3; Affidavit of Sam Kliewer at ¶ 3.

Other states recognize the link between the availability of long-term, fixed-rate contracts and the encouragement of QF development. For instance, during Michigan's recent update to its PURPA implementation, the MPSC required utilities to offer 20-year standard contracts because it "found persuasive the claim that longer contracts would benefit both QFs and the [utility] by allowing better access to investment and financing. . ." The Oregon Public Utility Commission ("OPUC"), in setting standard contract terms at 20 years, concluded that such a term length was necessary "to ensure the terms of the standard contract facilitate appropriate financing for a QF project." The Wyoming Public Service Commission concluded that long-term standard contracts are necessary for financing and that 20-year contract terms are "adequate for obtaining a QF project financing."

Short-term contracts do not encourage QF development because short-term contracts make financing QFs prohibitively difficult. *See* Affidavit of Jim Straeter at ¶ 3; Affidavit of Sam Kliewer at ¶ 3.To illustrate, compare the number of PacifiCorp's QF contracts in Washington, which has 5-year terms ¹⁰, to other states in which PacifiCorp operates. In Oregon and Wyoming where 20-year contract terms are required, PacifiCorp has **twenty-eight QF contracts** and **eight QF contracts**, respectively. ¹¹ In Utah where 15-year contract terms are required, PacifiCorp has **twenty-six QF contracts**. ¹² In contrast, the company has **only three QF contracts in Washington**, which again only allows for 5-year terms in its standard contract. ¹³

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⁷ *In re Consumers Energy Co.*, Case No. U-18090, Order at 22-23, (Mich. Pub. Serv. Comm'n May 31, 2017) *available at* https://perma.cc/4K2Z-5WWW.

⁸ In re Investigation Relating to Electric Utility Purchases from QFs, OPUC Docket No. UM 1129, Order No. 05-584 at 19 (Ore. Pub. Util. Comm'n May 13, 2005) available at https://perma.cc/C5YX-R3GG. In 2014, the OPUC reaffirmed the 20-year standard contract term length. In re Investigation into QF Contracting, OPUC Docket No. UM 1610, Order No. 14-058 (Feb. 24, 2014) available at https://perma.cc/HL76-YJUG. In re the Application of RMP to Implement a Permanent Avoided Cost Methodology for Customers that do Not Qualify for Tariff Schedule 37 – Avoided Cost Purchases from QFs, WPSC Docket No. 20000-388-EA-11, Record No. 12750, Order No. 20416 at 19 (Wyo. Pub. Serv. Comm'n Nov. 4, 2011) available at https://perma.cc/EC8Q-.

¹⁰ See PacifiCorp, dba Pacific Power & Light Co., Schedule 37, Sheet No. 37.2 available at https://perma.cc/97YD-LWKX

¹¹ See PacifiCorp 2017 Integrated Resource Plan at 78-79, available at https://perma.cc/2JVR-U7SQ.

 $^{^{12}}$ Id

¹³ *Id*.

Long-term contracts are vitally important to promoting QF development and furthering the policy goals of PURPA. Duke Energy's failure to include a standard contract with a term length and fixed rates renders its 30-day filing in violation of applicable Indiana law requiring long-term contracts and a defined term length. Burns Ind. Code Ann. § 8-1-2.4-4(a); 170 IAC 4-4.1-11(c)(1). The standard contract also fails to contain the option for fixed rates over the long-term, in violation of 18 C.F.R. § 292.304(d)(2)(ii).

OBJECTION TWO: Duke Energy's 30-Day Filing Fails to Contain Avoided Cost Information Required by 18 C.F.R. § 292.302(b).

Federal regulations require electric utilities to biennially file three categories of avoided cost information with the Commission and utilities must maintain this information for "public inspection." 18 C.F.R. 292.302(b). <u>First</u>, utilities are required to submit 5-year estimates of their avoided energy costs. § 292.302(b)(1). <u>Second</u>, utilities are required to submit planned capacity additions over the next 10 years. § 292.302(b)(2). <u>Third</u>, utilities are required to submit the cost estimates for such capacity additions. § 292.302(b)(3).

Duke Energy's 30-day filing at issue in this Objection does not contain the avoided cost information required by 18 C.F.R. § 292.302(b), and neither does Duke Energy's 2017 30-day filing, IURC 30-Day Filing No. 50038. In contrast, Indiana Michigan Power Company has filed the information required by 18 C.F.R. § 292.302(b)(1) in the last two years ¹⁴—but they too have not filed the information required by 292.302(b)(2) or (b)(3) in compliance with the biennial requirement.

In addition, Objectors are not aware of Duke Energy filing this required avoided cost information with the Commission in any other docket. Therefore, Duke Energy's 30-day filing at issue in this docket fails to comply with applicable federal law by not containing the required biennial avoided cost information.

CONCLUSION

Objectors respectfully request the Commission:

- (1) Find that this Objection complies with 170 IAC 1-6-7, and that Duke Energy's 30-day filing, IURC 30-Day Filing No. 50119, not be presented to the full Commission for consideration under the 30-day administrative filing rule until these deficiencies are rectified;
- (2) Require Duke Energy to file an updated standard contract with a defined term of sufficient length and the ability to fix rates over the term of the contract;
- (3) Open a statewide docket to investigate PURPA implementation in Indiana. This investigation could examine and establish sufficient standard contract term lengths, whether the current avoided cost methodology adequately represents Duke Energy's avoided costs, and any other issues the Commission deems desirable.

(signature page follows)

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¹⁴ See IURC 30-Day Filing Nos. 50125 (2018) and 50037 (2017).

Respectfully submitted,

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Received: February 23, 2018
IURC 30-Day Filing No.: 50119
Indiana Utility Regulatory Commission

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February 28, 2018

Secretary of the Commission Indiana Utility Regulatory Commission 101 W. Washington St. Suite 1500 East Indianapolis, IN 46204-3407

Dear Secretary:

Duke Energy Indiana, LLC hereby submits, in accordance with 170 IAC 1-4-4.1-10, for review and approval under the Commission's thirty-day filing procedure, Standard Contract Rider No. 50 – Parallel Operation for Qualifying Facility.

Standard Contract Rider 50 shows Duke Energy Indiana's standard offer energy and capacity rates for 2018 for a qualifying facility. As per the Commission, under 170 IAC 1-6-3, Section 3-6, this filing should be made under the thirty-day filing procedure.

Attached are the working papers that show the development of the standard offer energy and capacity rates for 2018. This filing reflects the variable and fixed costs impacts from an updated study from Burns and Mac. Further, this filing reflects the capital structure and current cost rates as of December 31, 2017. It also reflects the cost of common equity rate approved by the Commission in Cause No. 42359. The energy rate was developed utilizing a Planning and Risk (PaR) model version 6.1 simulation run that treats the 100 MW decrement as a dispatchable non-firm, external purchase. Thus, the marginal energy cost savings is the replacement cost for the 100 MW purchase. This cost includes fuel, fuel handling, variable O&M related to energy, effluent values and fuel auxiliary costs. Generator start-up cost have been included.

The marginal energy cost shows little change from the prior year.

A 221.1 MW combustion turbine is used as the 2018 standard offer capacity rate.

We have compared this to a 221.1 MW combustion turbine with an in-service date of 2021.

We are filing Rider 50 and all associated work papers, including the Company's verified statement that we have provided or will provide notice to our customers as required under Section 6 of the thirty-day filing rules, electronically. We would appreciate the return of a file-stamped copy for our files.

Secretary of the Commission February 28, 2018 Page 2

If there are any questions concerning this filing, please contact me at 513.287.2386.

Sincerely,

James A. Riddle Attachments

CC:

J. R. Bailey

James A. Ridallo

B. P. Davey

M. T. Diaz

C. D. Hixson

K. A. Karn

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1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14 Eighteenth Revised Sheet No.50 Cancels and Supersedes Seventeenth Revised Sheet No. 50 Page No. 1 of 2

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Availability

Available to any Customer contracting for parallel operation of a qualifying facility (cogeneration or small power production facility) in accordance with 170 IAC 4-4.1-1 et. seq. The qualifying facility must be located adjacent to an electric line of Company that is adequate for the service provided by such qualifying facility.

Contract

Customer shall enter into a contract in the applicable form (Exhibit A—Contract for the Purchase of Energy from Qualifying Facility or Exhibit B—Contract for the Purchase of Energy and Capacity from Qualifying Facility) before operating any generating equipment electrically connected with Company's electric system.

Rate for Purchase of Energy

Company will pure	chase energy fro	om the qualifyii	ng facility of	Customer in	accordance	with the	conditions and
limitations of this F	Rider and the ap	plicable contra	ct at the follo	wing rate:			

For all kWh supplied per month......\$0.28230per kWh

Measured by suitable integrating instruments.

Rate for Purchase of Capacity

Company will purchase capacity supplied from the qualifying facility of Customer in accordance with the conditions and limitations of this Rider and the applicable contract at the following rate:

Rate per kW per month of Contracted Capacity\$4.26 per kW

Customer shall receive from Company payment for such qualifying facility capacity in accordance with the following:

\$ per kW x Contracted Capacity in kW x ($_E$) per month KxT

Where: E = kilowatt-hours supplied by qualifying facility during the Peak Period

K = kilowatts of capacity the qualifying facility contracts to provide to Company

T = number of hours in the Peak Period

Peak Period shall be defined as follows:

For the months of June through September, the Peak Period shall be Monday through Saturday 9:00 a.m. through 9:00 p.m. (Eastern Standard Time), excluding holidays defined below. For the months of October through May, the Peak Period shall be Monday through Saturday 7:00 a.m. through 9:00 p.m. (Eastern Standard Time), excluding holidays defined below.

Issued: Effective:

1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14 Eighteenth Revised Sheet No.50 Cancels and Supersedes Seventeenth Revised Sheet No. 50 Page No. 2 of 2

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

The entire twenty-four (24) hours of the following holidays will be considered as off-peak hours:

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Whenever any of the above holidays occur on a Sunday and the following Monday is legally observed as a holiday, the entire twenty-four (24) hours of such Monday will be considered as off-peak hours.

Whenever any of the above holidays occur on a Saturday and the preceding Friday is legally observed as a holiday, the entire twenty-four (24) hours of such Friday will be considered as off-peak hours.

Contracted Capacity shall be the amount of capacity expressed in terms of kilowatts that Customer guarantees the qualifying facility will supply to Company as provided for in the contract for such service.

Special Terms and Conditions

- 1. It shall be Customer's responsibility to inform Company of any changes in its electric generation capability.
- 2. Customer shall comply with all applicable requirements of Standard Contract Rider No. 80 Interconnection Service.
- 3. Customer may be required to enter into a "Substation Operation and Maintenance Agreement" for setting, resetting, and adjusting the Control Equipment.
- 4. Customer shall agree to pay Company, in accordance with "Standard Contract Rider No. 53—Excess Facilities," for all excess facilities required by Company to provide service to such parallel operation, as determined by Company, including any additional metering equipment required for Company to purchase electric energy from the qualifying facility.
- 5. Customer shall agree that Company shall not be liable for any damage to, or breakdown of Customer's equipment operated in parallel with Company's electric system.
- 6. Customer shall agree to release, indemnify, and hold harmless Company from any and all claims for injury to persons or damage to property due to or in any way connected with the operation of Customer's said generators.
- 7. Company may install necessary metering to monitor the electric output of Customer's generating facility. Customer shall agree that the watt-hour and reactive-ampere-hour meters installed by Company to measure electric energy may be equipped to prevent reverse registration.
- 8. Supplementary, Backup, Interruptible and/or Maintenance Power, as defined in 170 IAC 4-4.1-1, will be supplied by Company only in accordance with the applicable rate schedules, this Rider, the applicable contract and the applicable Service Schedules to be filed by Company with the Commission. Such rates shall be non-discriminatory and shall be based on the costs to provide such service to Customer.
- 9. To the extent required by law, Company will make available wheeling service to Customer in accordance with the provisions of 170 IAC 4-4.1-6.

Issued:	Effective:
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its own expense.

1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14 Fourth Revised Exhibit Cancel and Supersedes Third Revised Exhibit A Page No. 1 of 4

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy from Qualifying Facility

bet sub	This Contract, made and entered into as of this day of, 20, by and sween Duke Energy Indiana, LLC (hereinafter "Company"), an Indiana corporation and an electric utility bject to the jurisdiction of the Indiana Utility Regulatory Commission (hereinafter "Commission"), and (hereinafter "Customer").
WI	TNESSETH:
	WHEREAS, Customer is constructing or has constructed the following facilities (description): located in, Indiana; and
4.1	WHEREAS, Customer's facility is a "qualifying facility" (hereinafter "QF") as defined in 170 IAC 4-1; and
	WHEREAS, Customer desires to operate its QF in parallel with Company's electric system, and to gage in electric energy transactions with Company, but Customer does not desire to have Company chase any of the capacity of Customer's QF; and
to (WHEREAS, Company's electric energy service to Customer and Customer's electric energy service Company shall have the following characteristics:
	NOW, THEREFORE, in consideration thereof, Customer and Company agree as follows:
1.	Service Option. At the beginning of the contract period, Customer shall elect one of the two following options:
	Option A. Simultaneous sale of the entire electric energy output of the QF to Company, and purchase of all of Customer's electric energy requirements from Company (simultaneous purchase and sale shall relate to the net electric energy output of the QF, exclusive of the electricity used in the generating process); or
	Option B. Use of electric energy output of the QF by Customer to supply Customer's own electric energy requirements, and purchase of Customer's remaining requirements, if any, from Company.
	Customer elects Option
2.	Interconnection. Customer shall comply with all applicable requirements of Standard Contract Rider No. 80 – Interconnection Service and 170 IAC 4-4.1-7.
	If required by Company, Customer agrees to enter into a "Substation Operation and Maintenance Agreement" providing for Company to set, reset and adjust the Control Equipment. Customer shall make no modification to the QF or Control Equipment without prior review and approval of Company.
3.	Application. It is understood and agreed that this Contract applies only to the operation of Customer's QF located at, Indiana.
4.	Metering and Excess Facilities. The electric energy supplied hereunder by Customer shall be measured by integrating instruments supplied by Company. Customer shall pay Company, in accordance with "Standard Contract Rider No. 53—Excess Facilities," for all excess facilities required by Company to provide service to such parallel operation, as determined by Company, including any

Issued: December 30, 2015 Effective: January 1, 2016

additional metering equipment required for Company to purchase electric energy from the QF, as determined by Company. Company may, at its sole option, install additional recording instruments at

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Cancel and Supersedes
Third Revised Exhibit A
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STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy from Qualifying Facility

- 5. **System Emergency.** Company shall not be required to purchase from or sell electric energy to Customer at the time of an emergency on either Company's or Customer's electric system. System emergencies causing discontinuance of parallel operation are subject to verification by the Commission.
- 6. Purchase of Energy. Company will purchase the electric energy supplied to its system from Customer's QF at the rate of the average of the marginal running costs of Company adjusted for line losses in accordance with 170 IAC 4-4.1-8 (a), as then set forth in "Standard Contract Rider No. 50—Parallel Operation For Qualifying Facility." Company shall file annually with the Commission data supporting such costs. The basis for the determination of such rate for the purchase of energy shall be an appropriate generation simulation program with and without one hundred megawatts of load decrement. Company shall make no capacity payments for the energy supplied by Customer's QF.

10. **Insurance.** Customer shall procure and keep in force during all periods of parallel operation with Company's electric system, the following insurance, with insurance carriers acceptable to Company, and in amounts not less than the following:

Coverage Limits

Comprehensive General Liability

Contractual Liability

(to be inserted depending upon the

Bodily Injury nature and size of the QF)

Property Damage

Customer shall deliver a CERTIFICATE OF INSURANCE verifying the required coverage to:

Duke Energy Indiana, LLC Attention: District Manager

at least fifteen (15) days prior to any interconnection with Company's electric system by Customer.

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STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy from Qualifying Facility

11. Release and Indemnification. Each party shall release, indemnify and hold harmless the other party from and against all claims, liability, damages and expenses, including attorneys' fees, based on any injury to any person, including loss of life, or damage to any property, including loss of use thereof, arising out of, resulting from or connected with, or that may be alleged to have arisen out of, resulted from or connected with, an act or omission by such other party, its employees, agents, representatives, successors or assigns in the construction, ownership, operation or maintenance of such party's facilities used in connection with this Contract. Upon the written request of the party seeking relief under this Section 13, the other party shall defend any suit asserting a claim covered by this Section 13. If a party is required to bring an action to enforce its rights under this Section 13, either as a separate action or in connection with another action, and said rights are upheld, the party from whom the relief was sought shall reimburse the party seeking such relief for all expenses, including attorneys' fees, incurred in connection with such action.

12.	Term . This Contract shall be in effect for an initial term ofyears, beginning
	, 20 and ending
	, 20 , and thereafter shall continue in effect for succeeding like terms,
	unless and until terminated by written notice given by one party to the other party at least sixty (60)
	days prior to the initial date of expiration, or any succeeding expiration date, and stating an intention
	to terminate this Contract as of the applicable expiration date.

- 13. Termination of Any Applicable Existing Agreement. From and after the date when service commences under this Contract, this Contract shall supersede any oral and/or written agreement between Company and Customer concerning the service covered by this Contract and any such agreement shall be deemed to be terminated as of the date service commences under this Contract.
- 14. Force Majeure. "Force Majeure" means any cause or event not reasonably within the control of the party claiming Force Majeure, including, but not limited to, the following: acts of God, strikes, lockouts, or other industrial disturbances; acts of public enemies; orders or permits or the absence of the necessary orders or permits of any kind which have been properly applied for from the government of the United States, the State of Indiana, any political subdivision or municipal subdivision or any of their departments, agencies or officials, or any civil or military authority; unavailability of a fuel or resource used in connection with the generation of electricity; extraordinary delay in transportation; unforeseen soil conditions; equipment, material, supplies, labor or machinery shortages; epidemics; landslides; lightning; earthquakes; fires; hurricanes; tornadoes; storms; floods; washouts; drought; arrest; war; civil disturbances; explosions; breakage or accident to machinery, transmission lines, pipes or canals; partial or entire failure of utilities; breach of contract by any supplier, contractor, subcontractor, laborer or materialman; sabotage; injunction; blight; famine; blockade; or quarantine.

If either party is rendered wholly or partly unable to perform its obligations because of Force Majeure, both parties shall be excused from whatever obligations are affected by the Force Majeure (other than the obligation to pay money) and shall not be liable or responsible for any delay in the performance of, or the inability to perform, any such obligations for so long as the Force Majeure continues. The party suffering an occurrence of Force Majeure shall, as soon as is reasonably possible after such occurrence, give the other party written notice describing the particulars of the occurrence and shall use its best efforts to remedy its inability to perform, provided, however, that the settlement of any strike, walkout, lockout or other labor dispute shall be entirely within the discretion of the party involved in such labor dispute.

1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14
Fourth Revised Exhibit
Cancel and Supersedes
Third Revised Exhibit A
Page No. 4 of 4

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy from Qualifying Facility

- 15. **Invalid Legal Basis.** This Contract has been entered into by Company and Customer pursuant to the Commission's October 5,1984 Order in Cause No. 37494 approving rules and regulations with respect to cogeneration and alternate energy production facilities, 170 IAC 4-4.1-1 et. seq., under Public Law 72-1982, IC 8-1-2.4-1 et. seq. In the event that any part of such Commission Order, such rules and regulations or such law is finally adjudged by a court of competent jurisdiction to be invalid, then either Company or Customer may, at its sole option, terminate this Contract at any time within one hundred eighty (180) days of the date such determination becomes final by giving sixty (60) days' written notice to the other party stating an intention to terminate this Contract at the expiration of such sixty (60) day period.
- 16. **Wheeling Service.** To the extent required by law, Company will make available wheeling service to Customer in accordance with the provisions of 170 IAC 4-4.1-6.

IN WITNESS WHEREOF, the parties have executed this Contract, effective as of the date first above written.

	Duke Energy Indiana, LLC "Company"
Ву:	
	"Customer"
Ву:	

Duke Energy Indiana, LLC 1000 East Main Street

Plainfield. Indiana 46168

IURC NO. 14 Fourth Revised Exhibit B Cancels and Supersedes Third Revised Exhibit B Page No. 1 of 6

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy and Capacity from Qualifying Facility

	This Contract, made and entered into as of this day of, 20_, by and between Duke ergy Indiana, LLC (hereinafter "Company"), an Indiana corporation and an electric utility subject to the sdiction of the Indiana Utility Regulatory Commission (hereinafter "Commission"), and (hereinafter "Customer").
WI	TNESSETH:
	WHEREAS, Customer is constructing or has constructed the following facilities (description): located in,
Ind	iana; and
4.1	WHEREAS, Customer's facility is a "qualifying facility" (hereinafter "QF") as defined in 170 IAC 4-1; and
eng	WHEREAS, Customer desires to operate its QF in parallel with Company's electric system, and to gage in electric energy and capacity transactions with Company; and
to (WHEREAS, Company's electric energy service to Customer and Customer's electric energy service Company shall have the following characteristics:
	NOW, THEREFORE, in consideration thereof, Customer and Company agree as follows:
1.	Service Option. At the beginning of the contract period, Customer shall elect one of the two following options:
	Option A. Simultaneous sale of the entire electric energy output of the QF to Company, and purchase of all of Customer's electric energy requirements from Company (simultaneous purchase and sale shall relate to the net electric energy output of the QF, exclusive of the electricity used in the generating process); or
	Option B. Use of electric energy output of the QF by Customer to supply Customer's own electric energy requirements, and purchase of Customer's remaining requirements, if any, from Company.
	Customer elects Option
2.	Interconnection. Customer shall comply with all applicable requirements of Standard Contract Rider No. 80 – Interconnection Service and 170 IAC 4-4.1-7.
	If required by Company, Customer agrees to enter into a "Substation Operation and Maintenance Agreement" providing for Company to set, reset and adjust the Control Equipment. Customer shall make no modification to the QF or Control Equipment without prior review and approval of Company.
3.	Application. It is understood and agreed that this Contract applies only to the operation of Customer's QF located at, Indiana.

1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14 Fourth Revised Exhibit B Cancels and Supersedes Third Revised Exhibit B Page No. 2 of 6

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy and Capacity from Qualifying Facility

- 4. Metering and Excess Facilities. The electric energy supplied hereunder by Customer shall be measured by integrating instruments supplied by Company. Customer shall pay Company, in accordance with "Standard Contract Rider No. 53 Excess Facilities," for all excess facilities required by Company to provide service to such parallel operation, as determined by Company, including any additional metering equipment required for Company to purchase electric energy from the QF, as determined by Company. Company may, at its sole option, install additional recording instruments at its own expense.
- 5. **System Emergency.** Company shall not be required to purchase from or sell electric energy to Customer at the time of an emergency on either Company's or Customer's electric system. System emergencies causing discontinuance of Parallel operation are subject to verification by the Commission.
- 6. Purchase of Energy. Company will purchase the electric energy supplied to its system from Customer's QF at the rate of the average of the marginal running costs of Company adjusted for line losses in accordance with 170 IAC 44.18 (a), as then set forth in "Standard Contract Rider No. 50 Parallel Operation For Qualifying Facility." Company shall file annually with the Commission data supporting such costs. The basis for the determination of such rate for the purchase of energy shall be an appropriate generation simulation program with and without one hundred megawatts of load decrement. Except as set forth in section 7. below, Company shall make no capacity payments for the energy supplied by Customer's QF.
- 7. **Purchase of Capacity.** Company will purchase the electric capacity supplied to its system from Customer's QF at the Company's monthly avoided cost of capacity for Company per kilowatt in accordance with 170 IAC 4-4.1-9 (a), as then set forth in "Standard Contract Rider No. 50—Parallel Operation For Qualifying Facility." Company shall file annually with the Commission data supporting such costs.

Monthly payments for such purchase of capacity shall be adjusted by the application of a factor developed in accordance with 170 IAC 4-4.1-9 (d) reflecting actual output of the QF.

- 8. **Capacity.** The amount of "Contracted Capacity" that Customer guarantees the QF will make available to Company during each year of the Contract is kw.
- 9. Performance. The parties agree that the amount of the capacity payment which Company is to make to Customer for the QF is based upon the QF's performance of its obligation to provide Contracted Capacity during the term of this Contract. The parties further agree that in the event Company does not receive such full performance by reason of a termination of this Contract prior to its expiration or a reduction in the amount of such Contracted Capacity, (1) Company shall be deemed damaged by reason thereof, (2) it would be impracticable or extremely difficult to fix the actual damages to Company resulting therefrom, (3) the reductions, offsets and refund payments as provided hereafter, as applicable, are in the nature of adjustments in prices and are to be considered liquidated damages, and not a penalty, and are fair and reasonable, and (4) such reductions, offsets and refund payments represent a reasonable endeavor by the parties to estimate a fair compensation for the reasonable damages that would result from such premature termination or failure to deliver the specified amount of capacity.

1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14
Fourth Revised Exhibit B
Cancels and Supersedes
Third Revised Exhibit B
Page No. 3 of 6

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy and Capacity from Qualifying Facility

- 10. Refund. In the event this Contract is terminated or the Contracted Capacity is reduced prior to the expiration of the initial term of this Contract, Customer shall refund to Company the capacity payments in excess of those capacity payments which would have been made had all of the capacity or the reduced capacity, whichever is applicable, been subject to a capacity rate based on the actual term of delivery to Company.
- 11. **Probationary Period.** Except in the event of Force Majeure, as defined in Section 21 of this Contract, if, within any twelve (12) month period during the term of this Contract ending on the anniversary date of the date that the QF first provided capacity to Company under this Contract, the QF fails to provide Company with the Contracted Capacity specified in this Contract, the capacity for which Customer shall be entitled to capacity payments during the subsequent twelve (12) month period (hereinafter "the Probationary Period") shall be reduced to the capacity provided during the prior twelve (12) month period. If, during the Probationary Period, the QF provides the Contracted Capacity specified in this Contract, Company, within thirty (30) days following the end of the Probationary Period, shall reinstate the full capacity amount originally specified in this Contract. If, during the Probationary Period, the QF again fails to provide the Contracted Capacity specified in this Contract, Company may permanently reduce the capacity purchased from the QF for the remainder of the term of this Contract. Company may also require that the reduction in the capacity be subject to the refund provisions of Section 12 of this Contract.
- 12. **Scheduled Outages.** Scheduled outages of the QF shall be usefully coordinated with scheduled outages of Company's generating facilities.
- 13. Power Supplied by Company. Supplementary, Backup, Interruptible and/or Maintenance Power, as defined in 170 IAC 4-4.1-1, requested by Customer shall be supplied by Company only in accordance with the applicable rate schedules, "Standard Contract Rider No. 50—Parallel Operation For Qualifying Facility," this Contract and the applicable Service Schedules to be filed by Company with the Commission. Such rates shall be non-discriminatory and shall be based on the costs to provide such service.

by Comp	any every					$_{ extsf{-}}$, and Compa	ıny shall provi	de those
meter after the r	readings meter reading.	to	Customer	and	render	payment	therefor	within

Customer shall be billed for the electric service requirements used by Customer in accordance with Section 10 of this Contract.

15. **Insurance.** Customer shall procure and keep in force during all periods of parallel operation with Company's electric system, the following insurance, with insurance carriers acceptable to Company, and in amounts not less than the following:

Exhibit A - Page 12 of 25

Duke Energy Indiana, LLC 1000 East Main Street

Plainfield. Indiana 46168

IURC NO. 14 Fourth Revised Exhibit B Cancels and Supersedes Third Revised Exhibit B Page No. 4 of 6

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy and Capacity from Qualifying Facility

	Coverage	Limits
	Comprehensive General Liability	
	Contractual Liability	(to be inserted depending upon the
	Bodily Injury	nature and size of the QF)
	Property Damage	
	Customer shall deliver a CERTIFICA	ATE OF INSURANCE verifying the required coverage to:
	Duke Energy Indiana,LLC Attention: District Manager	
	at least fifteen (15) days prior to any	interconnection with Company's electric system by Customer.
16.	from and against all claims, liability injury to any person, including loss arising out of, resulting from or confrom or connected with, an acrepresentatives, successors or ass such party's facilities used in conrecking relief under this Section 18 this Section 13. If a party is require either as a separate action or in co	ch party shall release, indemnify and hold harmless the other party damages and expenses, including attorneys' fees, based on any of life, or damage to any property, including loss of use thereof nected with, or that may be alleged to have arisen out of, resulted to or omission by such other party, its employees, agents signs in the construction, ownership, operation or maintenance of nection with this Contract. Upon the written request of the party, the other party shall defend any suit asserting a claim covered by red to bring an action to enforce its rights under this Section 18 nection with another action, and said rights are upheld, the party shall reimburse the party seeking such relief for all expenses a connection with such action.
17.	, 20_, and ending succeeding like terms, unless and party at least sixty (60) days prior to	ect for an initial term ofyears, beginning, 20_, and thereafter shall continue in effect for until terminated by written notice given by one party to the other to the initial date of expiration, or any succeeding expiration date, this Contract as of the applicable expiration date.
8.	commences under this Contract, t between Company and Customer	Existing Agreement. From and after the date when service his Contract shall supersede any oral and/or written agreement concerning the service covered by this Contract and any such erminated as of the date service commences under this Contract.

Exhibit A - Page 13 of 25

Duke Energy Indiana, LLC

1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14 Fourth Revised Exhibit B Cancels and Supersedes Third Revised Exhibit B Page No. 5 of 6

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy and Capacity from Qualifying Facility

19. Force Majeure. "Force Majeure" means any cause or event not reasonably within the control of the party claiming Force Majeure, including, but not limited to, the following: acts of God, strikes, lockouts, or other industrial disturbances; acts of public enemies; orders or permits or the absence of the necessary orders or permits of any kind which have been properly applied for from the government of the United States, the State of Indiana, any political subdivision or municipal subdivision or any of their departments, agencies or officials, or any civil or military authority; unavailability of a fuel or resource used in connection with the generation of electricity; extraordinary delay in transportation; unforeseen soil conditions; equipment, material, supplies, labor or machinery shortages; epidemics; landslides; lightning; earthquakes; fires; hurricanes; tornadoes; storms; floods; washouts; drought; arrest; war; civil disturbances; explosions; breakage or accident to machinery, transmission lines, pipes or canals; partial or entire failure of utilities; breach of contract by any supplier, contractor, subcontractor, laborer or material man; sabotage; injunction; blight; famine; blockade; or quarantine.

If either party is rendered wholly or partly unable to perform its obligations because of Force Majeure, both parties shall be excused from whatever obligations are affected by the Force Majeure (other than the obligation to pay money) and shall not be liable or responsible for any delay in the performance of, or the inability to perform, any such obligations for so long as the Force Majeure continues. The party suffering an occurrence of Force Majeure shall, as soon as is reasonably possible after such occurrence, give the other party written notice describing the particulars of the occurrence and shall use its best efforts to remedy its inability to perform, provided, however, that the settlement of any strike, walkout, lockout or other labor dispute shall be entirely within the discretion of the party involved in such labor dispute.

- 20. **Invalid Legal Basis.** This Contract has been entered into by Company and Customer pursuant to the Commission's October 5,1984 Order in Cause No. 37494 approving rules and regulations with respect to cogeneration and alternate energy production facilities, 170 IAC 4-4.1-1 et. seq., under Public Law 72-1982, IC 8-1-2.4-1 et. seq. In the event that any part of such Commission Order, such rules and regulations or such law is finally adjudged by a court of competent jurisdiction to be invalid, then either Company or Customer may, at its sole option, terminate this Contract at any time within one hundred eighty (180) days of the date such determination becomes final by giving sixty (60) days' written notice to the other party stating an intention to terminate this Contract at the expiration of such sixty (60) day period.
- 21. **Wheeling Service.** To the extent required by law, Company will make available wheeling service to Customer in accordance with the provisions of 170 IAC 4-4.1-6.

Exhibit A - Page 14 of 25

Duke Energy Indiana, LLC

1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14 Fourth Revised Exhibit B Cancels and Supersedes Third Revised Exhibit B Page No. 6 of 6

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Contract for the Purchase of Energy and Capacity from Qualifying Facility

IN WITNESS WHEREOF, the parties have executed this Contract, effective as of the date first above written.

	Duke Energy Indiana, LLC "Company"
Ву:	
	"Customer"
Ву:	

2. Cogeneration and Alternate Energy Production Facilities

The following utility has submitted a proposed tariff for the purchase of power and energy from a qualifying facility as required in Appendix A, Rules and Regulations with Respect to Cogeneration and Alternate Energy Production Facilities, (170 I.A.C. 4-4.1), Cause No. 37494. Supporting documentation has been supplied.

<u>Utility</u>	Rate <u>Schedule</u>	Energy (\$/kWH)	Demand (\$/kW/month)
Duke Energy Indiana, LLC	Rider No. 50	0.028230	4.26

The tariff sheet affected by this filing is Sheet No. 50.

2018 COGENERATION FILING CALCULATION OF PRESENT VALUE OF CARRYING CHARGES

$$\frac{(1+r)^{n}-1}{r*(1+r)^{n}} = 11.98493$$

Where:

D = CCR * Cumulative Present Worth Factor

Source: Financial Capital Structure as of 12/31/2017 per company books and records. Long term debt rate is for 30 year first mortgage bond new issue as of 2/1/2018.

2018 COGENERATION FILING CALCULATION OF STANDARD OFFER RATE FOR THE PURCHASE OF ENERGY

RATE FOR THE PURCHAS	SE OF ENERGY				
2018 ENERGY RATE =	(\$0.027475	PER KWH)	
2018 ENERGY RATE ADJU	JSTED FOR LOS	SSES			
	=	\$0.027475	PER KWH / (1 - (0.053440042	/2))
	=	\$0.028230	PER KWH		

WHERE: (A) The Planning and Risk (PaR) model version 6.1 cost program performed a single run that treats the one hundred MW decrement as a dispatchable non-firm, external purchase. Thus, the marginal energy cost savings is the replacement cost for the 100 MW purchase. This cost includes fuel, fuel handling, variable O&M related to energy, effluent values and fuel auxiliary costs. We have included changes in generator start-up costs.

(B) The loss factor is 5.3440042%.

Source: Primary Metered Sales Retail Loss Factor from latest retail rate case (Cause No. 42359)

2018 COGENERATION FILING CALCULATION OF STANDARD OFFER RATE FOR THE PURCHASE OF CAPACITY

FOR GENERIC COMBUSTION TURBINE

RATE FOR THE PURCHASE OF CAPACITY

$$C = \frac{1}{12} \left[(D * V * F * ((1+Ip)^{\Lambda(t-1)})) + (O * ((1+Io)/(1+r)) * ((1+Io)^{\Lambda(t-1)})) \right] / (1-L/2)$$

$$= \frac{4.26}{12} PER KW PER MONTH$$

$$Ca = C * (((1+Ip)/(1+r))^{\Lambda(Yi-Yc)})$$

$$= \frac{4.26}{12} PER KW PER MONTH$$

```
WHERE: D =
                          1.15535
          V =
                             $626 PER KW (2018 $)
                          0.056352 (Based on formula contained in 170 IAC 4-4.1-9)
          lp =
                            2.50%
                            2.50%
          lo =
                             $9.39 PER KW (2018 $)
          0 =
                            7.35%
                                35
                       5.3440042%
                                 1
          t =
          Yi =
                             2018 (In service year of CT)
          Yc =
                             2018 (Current year)
```

NOTE: (a) Investment cost based on a 221.1 MW hypothetical combustion turbine with a 2018 in service date.

(b) Escalation rates is standard rate used in model.

2018 COGENERATION FILING CALCULATION OF STANDARD OFFER RATE FOR THE PURCHASE OF CAPACITY

FOR 2021 222.1 MW Combustion Turbine Unit

RATE FOR THE PURCHASE OF CAPACITY

$$C = \frac{1}{12} \left[(D * V * F * ((1+lp)^{\Lambda(t-1)}) + (O * ((1+lo)^{\Lambda(t-1)}) * ((1+lo)^{\Lambda(t-1)})) \right] / (1-L/2)$$

$$= \frac{4.47 \text{ PER KW PER MONTH}}{2}$$

$$C * (((1+lp)/(1+r))^{\Lambda(Yi-Yc)})$$

$$= \frac{3.89 \text{ PER KW PER MONTH}}{2}$$

```
WHERE: D =
                           1.15535
          V =
                              $626 PER KW (2018 $)
                          0.056352 (Based on formula contained in 170 IAC 4-4.1-9)
          lp =
                            2.50%
                            2.50%
          lo =
                             $9.39 PER KW (2018 $)
          0 =
                            7.35%
                                35
                       5.3440042%
                                 3
          t =
          Yi =
                             2021 (In service year of CT)
          Yc =
                              2018 (Current year)
```

NOTE: (a) Investment cost based on a 222.1 MW combined cycle unit with a 2021 in service date.

(b) Escalation rates is standard rate used in model.

Schedule 1

DUKE ENERGY INDIANA, INC.

Calculation Of Carrying Charge Rate For Cogeneration Facilities With A 30 Year Life For The 2018 Filing Based On Calendar Year 2017 Information

$CCR = (1/(1-t))^* ((r+d) + ((T/(1-T))^* (r+d-D)^* ((r-(bL+Ip))/r)))$

r:	Rate of Return	7.35%
d:	Sinking fund depreciation rate	0.99%
T:	Federal and State composite income tax rate	25.740%
D:	Book depreciation rate	3.33%
b:	Interest rate on debt capital	3.90%
L:	Debt ratio	47.70%
1:	Interest rate on preferred stock	0.00%
p:	Preferred stock ratio	0.00%
n:	Service life	30
t:	Other taxes & expense from revenues	0.000%

CCR = 9.64%

Memo:

Carrying Costs Calculation Check <u>9.64%</u>

Difference <u>0.00%</u>

2018 Cogeneration-Compliance Filing

A.		Marginal Energy Cost	100 MM/ Dun
	J. Riddle	Annual Run for with one hundred MW decrement (mills/kWh).	100 MW Run 27.48
В.		For Generic Combustion Turbine	
		In-Service Date Type of Unit Size of Unit (MW - summer) Investment Cost per kW-summer A. Fixed O&M Expense in the first year of service (\$/kW-yr, summer) Variable O&M Expense in the first year of service (\$/kW-yr, B. summer)	01/01/18 Combustion Turbine 222.1 625.79 4.459
	6. 7.	Total Fixed & Variable O&M Expense in the first year of service (\$/kW-yr, summer) Expected Life (years) Escalation Rates (%): 2018-2036 Investment O&M	9.386 35 2.50 2.50

Note: All costs expressed in January 2018 dollars.

Duke Energy Indiana, LLC 1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14

<u>EightSeventeenth</u> Revised Sheet
No.50

Cancels and Supersedes
Sevenixteenth Revised Sheet No. 50
Page No. 1 of 2

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

Availability

Available to any Customer contracting for parallel operation of a qualifying facility (cogeneration or small power production facility) in accordance with 170 IAC 4-4.1-1 et. seq. The qualifying facility must be located adjacent to an electric line of Company that is adequate for the service provided by such qualifying facility.

Contract

Customer shall enter into a contract in the applicable form (Exhibit A—Contract for the Purchase of Energy from Qualifying Facility or Exhibit B—Contract for the Purchase of Energy and Capacity from Qualifying Facility) before operating any generating equipment electrically connected with Company's electric system.

Rate for Purchase of Energy

Company will purchase energy from the qualifying facility of Customer in accordance with the conditions and limitations of this Rider and the applicable contract at the following rate:

For	all	kWh	supplied	per	
month		\$ <u>0.28230</u> 0.029706 per kWh			

Measured by suitable integrating instruments.

Rate for Purchase of Capacity

Company will purchase capacity supplied from the qualifying facility of Customer in accordance with the conditions and limitations of this Rider and the applicable contract at the following rate:

Rate per kW per month of Contracted Capacity\$4.264.20 per kW

Customer shall receive from Company payment for such qualifying facility capacity in accordance with the following:

\$ per kW x Contracted Capacity in kW x ($\underline{E}_{K,r,T}$) per month

Where: E = kilowatt-hours supplied by qualifying facility during the Peak Period

K = kilowatts of capacity the qualifying facility contracts to provide to Company

T = number of hours in the Peak Period

Peak Period shall be defined as follows:

For the months of June through September, the Peak Period shall be Monday through Saturday 9:00 a.m. through 9:00 p.m. (Eastern Standard Time), excluding holidays defined below. For the months of October through May, the Peak Period shall be Monday through Saturday 7:00 a.m. through 9:00 p.m. (Eastern Standard Time), excluding holidays defined below.

Issued: April 5, 2017 Effective: April 5, 2017

Duke Energy Indiana, LLC 1000 East Main Street Plainfield. Indiana 46168 IURC NO. 14

<u>EightSeventeenth</u> Revised Sheet
No.50

Cancels and Supersedes
Sevenixteenth Revised Sheet No. 50
Page No. 2 of 2

STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION— FOR QUALIFYING FACILITY

The entire twenty-four (24) hours of the following holidays will be considered as off-peak hours:

New Year's Day
Memorial Day
Independence Day

Labor Day
Thanksgiving Day
-Christmas Day

Whenever any of the above holidays occur on a Sunday and the following Monday is legally observed as a holiday, the entire twenty-four (24) hours of such Monday will be considered as off-peak hours.

Whenever any of the above holidays occur on a Saturday and the preceding Friday is legally observed as a holiday, the entire twenty-four (24) hours of such Friday will be considered as off-peak hours.

Contracted Capacity shall be the amount of capacity expressed in terms of kilowatts that Customer guarantees the qualifying facility will supply to Company as provided for in the contract for such service.

Special Terms and Conditions

- 1. It shall be Customer's responsibility to inform Company of any changes in its electric generation capability.
- 2. Customer shall comply with all applicable requirements of Standard Contract Rider No. 80 Interconnection Service.
- 3. Customer may be required to enter into a "Substation Operation and Maintenance Agreement" for setting, resetting, and adjusting the Control Equipment.
- 4. Customer shall agree to pay Company, in accordance with "Standard Contract Rider No. 53—Excess Facilities," for all excess facilities required by Company to provide service to such parallel operation, as determined by Company, including any additional metering equipment required for Company to purchase electric energy from the qualifying facility.
- 5. Customer shall agree that Company shall not be liable for any damage to, or breakdown of Customer's equipment operated in parallel with Company's electric system.
- 6. Customer shall agree to release, indemnify, and hold harmless Company from any and all claims for injury to persons or damage to property due to or in any way connected with the operation of Customer's said generators.
- 7. Company may install necessary metering to monitor the electric output of Customer's generating facility. Customer shall agree that the watt-hour and reactive-ampere-hour meters installed by Company to measure electric energy may be equipped to prevent reverse registration.
- 8. Supplementary, Backup, Interruptible and/or Maintenance Power, as defined in 170 IAC 4-4.1-1, will be supplied by Company only in accordance with the applicable rate schedules, this Rider, the applicable contract and the applicable Service Schedules to be filed by Company with the Commission. Such rates shall be non-discriminatory and shall be based on the costs to provide such service to Customer.
- 9. To the extent required by law, Company will make available wheeling service to Customer in accordance with the provisions of 170 IAC 4-4.1-6.

Issued: April 5, 2017 Effective: April 5, 2017

Dated: February 28, 2018

In accordance with 170 IAC 1-6 et seq., I hereby verify under the penalties of perjury that all affected customers have been notified as required under section 6 of the above-referenced rule by posting the attached legal notice on Duke Energy Indiana's website as well as publishing the legal notice in the newspaper(s) of general circulation encompassing the highest number of the utility's customers affected by the filing to the best of my knowledge, information and belief.

Duke Energy Indiana, LI

Melody Birmingham-Byrd, President

LEGAL NOTICE OF DUKE ENERGY INDIANA, LLC'S STANDARD CONTRACT RIDER NO. 50 PARALLEL OPERATION – FOR OUALIFYING FACILITY

DUKE ENERGY INDIANA, LLC ("Duke Energy Indiana") hereby provides notice that on February 28, 2018, Duke Energy Indiana, in accordance with 170 IAC 4-4.1-10, will submit its Standard Contract Rider No. 50, Parallel Operation-For Qualifying Facility ("Standard Contract Rider 50") to the Indiana Utility Regulatory Commission ("Commission") for approval under the Commission's thirty-day administrative filing procedures and guidelines. Standard Contract Rider 50 provides the calculation for the standard offer for the purchase of energy and capacity.

Standard Contract Rider 50 is available to all qualifying Duke Energy Indiana customers and should be approved thirty-days from the date of filing, February 28, 2018, unless an objection is made. Any objections may be made by contacting the Secretary of the Commission, or Barbara A. Smith or Randall C. Helmen or Mary M. Becerra with the Indiana Office of the Utility Consumer Counselor at the following addresses or phone numbers:

Indiana Utility Regulatory Commission 101 W. Washington St. Suite 1500 East Indianapolis, IN 46204-3407 317-232-2703

Indiana Office of Utility Consumer Counselor PNC Center 115 W. Washington St. Suite 1500 South Indianapolis, IN 46204 317-232-2494.

Duke Energy Indiana, LLCBy: Melody Birmingham-Byrd,
President

STATE OF INDIANA INDIANA UTILITY REGULATORY COMMISSION

AFFIDAVIT OF JAMES E STRAETER

James E Straeter, being duly sworn, deposes and states as follows:

- 1. I am the President of Ag Technologies, Inc in Rochester, IN. We have been installing solar as a part of our business since August of 2012. We have developed a patented system that provides for superior efficiency. We are a family-owned business and Ag Technologies is part of a seven-store farm equipment dealership organization covering North Central Indiana. I sell solar along with two sons and manage sales through other dealers in Indiana, Illinois and Ohio.
- 2. I have considered pursuing development of solar energy projects in Indiana under the PURPA tariff for Duke Energy Indiana and NIPSCO as well as several REMCs. However, upon reviewing the PURPA tariff for Duke Energy, there did not appear to be any method of obtaining long-term contracts with fixed rates. I was unable to locate a standard contract for NIPSCO's PURPA tariff, too. Due to the apparent inability to obtain long-term, fixed rate contracts, I decided against pursuing plans to develop solar energy projects based on the PURPA tariff.
- 3. I need the ability to obtain long-term contracts with fixed rates in order to obtain the financing necessary to develop solar projects. Without fixed rate contracts over a sufficient period of time, in my experience, financers will not be willing to take on the risk involved with variable rates and short term contracts. Because financers will not take on the risk, a risk my business cannot take as well, they will not finance possible solar project development.
- 4. I affirm, under the penalties of perjury, that the representations in the foregoing are true to the best of my knowledge, information and belief.

(signature follows)

Dated: March 23, 2018

James E Straeter

President

Ag Technologies Inc 1268 E 100 S, Rochester, IN 46975 574-224-8324

STATE OF INDIANA INDIANA UTILITY REGULATORY COMMISSION

AFFIDAVIT OF SAM KLIEWER

Sam Kliewer, being duly sworn, deposes and states as follows:

- My name is Sam Kliewer. I am a Policy Manager for Cypress Creek Renewables.
 Cypress Creek Renewables is one of the leading utility scale solar and solar + storage developers in the nation. In my role as a Policy Manager I am a subject matter expert on PURPA avoided costs and energy storage in eastern markets.
- 2. From mid-2016 to early 2017, Cypress Creek negotiated with Duke Energy Indiana ("Duke") in an effort to execute a contract under Duke's PURPA Tariff. At one point, Duke offered a 10-year contract with a variable rate that changed annually based on Duke's annual update to its PURPA Tariff's avoided cost rates. Duke would not agree to a contract with fixed rates longer than a year. The inability to reach an agreement on a long-term, fixed rate contract ended negotiations.
- 3. The lack of long-term, fixed rate contracts ended negotiations because it would be impossible for Cypress Creek to obtain the necessary financing to develop a project without long-term, fixed-rate contracts. In my experience, long-term, fixed rate contracts provide stability and minimize risk. This stability and minimized risk is necessary before a financer will provide the funds necessary to develop projects. It would be difficult to find any financer willing to provide funds with a contract that does not have fixed rates. In my experience, 15- to 20-year fixed rate contracts provide the stability and minimal risk necessary to attract financing.
- 4. I affirm, under the penalties of perjury, that the representations in the foregoing are true to the best of my knowledge, information and belief.

(signature follows)

Dated: March 23, 2018

Sam Kliewer
Policy Manager
Cypress Creek Renewables
130 Roberts Street

Asheville, NC 28801 (828) 233-8159

sam.kliewer@ccrenew.com